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Sustainability reporting as a tool for fostering sustainable growth in the agri-food sector: the case of Spain

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Abstract

The impact of business activity is of increasing concern to the European Union citizens. In response, Directive 2014/95/EU becomes the first supranational regulation that requires companies reporting business impacts on social and environmental sustainability using sustainability reports (SR). This study aims to analyse the quantity of sustainability information disclosed by Spanish agri-food companies with respect to the requirements established in Directive 2014/95/EU. In order to do so, a content analysis is applied to 30 SR following Global Reporting Initiative – GRI – Standards and published after the transposition of the Directive into Spanish regulation. Our findings show a generally low level of reporting, and most of the analysed SR fails to reliably document the information at indicator level. Indeed, the level of disclosure slightly increases for less material information, such as that related to social local communities and employees. Consequently, Spanish agri-food companies should start to make more of an effort to ensure that the information disclosed is complete and of high quality.

Keywords: Sustainability reporting, Social and environmental accounting, Corporate Social Responsibility, Agri-food sector, Directive 2014/95/EU.

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1. Introduction

In recent decades, one of the main motivations driving the European Union (EU) decision-making process has been sustainability (EFRAG, 2021). Different EU policies have tended to respond to this growing societal concern about the impact of economic activities on not only the environment but also society as a whole (Salazar-Ordóñez et al. 2013; Lombardi et al. 2015; European Commission, 2019; Salazar-Ordóñez et al. 2021), considering that companies are a pillar of growth and must act in a socially responsible way going beyond the generation of economic profits (Gray et al. 1996; Carroll and Buchholtz, 2014). Corporate Social Responsibility (CSR) thus becomes a key concept for businesses, leading to the monitoring and evaluation of social, environmental, ethical and corporate governance aspects of the business (Baldini et al. 2018). As a result, the disclosure of sustainability information becomes also critical, and is even highlighted by

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the United Nations' 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (Bebbington and Unerman, 2018).

When it comes to documenting and disseminating this kind of information, sustainability reporting is a useful tool, facilitating the monitoring and evaluation of companies by different stakeholders in society (Gray et al. 1996; Bovea et al. 2021; Ottenstein et al. 2021). In this vein, the European Commission publishes Directive 2014/95/EU (European Commission, 2014). This is the first supranational regulation stipulating that companies, which meet certain requirements, must disclose sustainability (also called non-financial) information containing social, environmental, ethical and corporate governance aspects. With the intention of measuring them, the Directive (European Commission, 2014) allows the use of different standards, such as the Global Reporting Initiative (GRI) (e.g., GRI, 2016), Sustainability Accounting Standards Board (SASB) (e.g., SASB, 2022) and the Integrated Reporting (IR) Framework (e.g., IIRC, 2020), without specifying which one is the most appropriate (Dumay et al. 2019; La Torre et al. 2018). Simply following these standards does not guarantee that the resulting report will be of high quality, in the sense that it contains relevant, comparable, verifiable, clear and neutral information (Pérez and López-Gutiérrez, 2017). From a managerial point of view, this puts pressure on managers as sustainability reports (SR) can potentially contribute to creating competitive advantages for a company (Kurucz et al. 2008; O'Dwyer and Unerman, 2016; Siano et al. 2017), and is a crucial tool for improving consumer confidence (Burnstein, 2021) given their position of vulnerability and risk (Pivato et al. 2008; Luhmann and Theuvsen, 2016). Moreover, the issue of asymmetric information (Minarelli et al. 2018) may limit the monitoring and evaluation of companies' contribution to sustainable growth (European Commission, 2014, 2019).

In this context, this paper aims to analyse the quantity of sustainability information disclosed with respect to the requirements established in Directive 2014/95/EU (European Commission, 2014). To that end, the analysis centres on the sustainability reports (SR) disclosed by companies in the Spanish agri-food sector, which combines agriculture and the food industry. Of all the different economic activities, the recently released European Green Deal (European Commission, 2019) identifies the food system as key to decoupling economic from the use of natural resources and pollution, playing a vital economic, social, and environmental role. In addition, Spain is the fourth largest agri-food economy in the EU in terms of production, total turnover, and exports (Ministerio de Agricultura, Pesca y Alimentación, 2022). Indeed, agri-food is the dominant branch of the Spanish industrial sector with a production value of over 130 billion euros (23.3% of total industrial production) (Ministerio de Agricultura, Pesca y Alimentación, 2022). As such, it was essential for the country's economic recovery from the COVID-19 health crisis (Cajamar, 2020). Its economic relevance is also reflected in the sustainability of rural areas (Marsden, 2003; Kallas et al. 2007), where it is considered a core sector ensuring rural development (Otiman et al. 2014), thus fulfilling social (or socio-cultural) and environmental functions (Bromley, 1996; Wilson, 2007). These goals are, in turn, emphasized in the related EU directives (European Commission, 2017, 2019).

In order to study the SR, a content analysis based on the GRI guidelines (GRI, 2017a) was applied to the only 30 Spanish agri-food companies that follow the GRI Standard (GRI, 2016) and present sustainability information after the transposition of the EU Directive (European Commission, 2014) into Spanish law; specifically, during the period

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between 2018 and 2020. GRI is an international standard for sustainability reporting (Luque and Larrinaga, 2016; Larrinaga et al. 2018) and produces guidelines (GRI, 2017a) linking the contents of each topic required under Directive 2014/95/EU (European Commission, 2014) with the corresponding GRI disclosures (GRI, 2016). In addition to legal requirements, companies use GRI standards for legitimacy reasons (Romero et al. 2019; Martínez-Ferrero et al. 2018) in an effort to demonstrate their strong performance on sustainability issues. In line with the tenets of legitimacy theory (Deegan, 2002), these standards may thus be used to gain support from stakeholders (Larrinaga, 2017) by showing that firms' activities are aligned with societal demands (Deegan, 2002; De Villiers and Marques, 2016).

Therefore, the novelty of this paper is threefold. First, there are very few studies that analyse the effects of the Directive 2014/95/EU (European Commission, 2014) in Spain. Those that do focus on different aspects such as the quality of the information disclosed (García-Benau et al. 2022), the quantity (Posadas and Tarquinio, 2021) or both (Sierra-García et al. 2018; Esteban-Arrea and Garcia-Torea, 2022). Second, there is only one study focused on the agri-food sector in Spain (Baviera-Puig et al. 2014), which predates Directive 2014/95/EU and analyses only four large Spanish agri-food companies. Authors such as O'Dwyer and Unerman (2016) point out the differences in SR disclosures between listed and unlisted companies, such as agri-food companies, and assert that there is still much to learn about sustainability reporting, which represents a significant gap in the literature. Third, to the best of the authors' knowledge, there are only two studies (Matuszak and Różańska, 2017; Tarquinio et al. 2020) that base their analysis of SR on the structure of the GRI index (GRI, 2017b), but applied to listed companies.

The rest of the paper is organized as follows: Section 2 is divided into two parts; the first one discusses the mandatory disclosure and the second provides the conceptual basis for the study, including an overview of sustainability reporting as a research topic and a summary of sustainability reporting in agri-food companies. Section 3 is also made up of two sub-sections, with the first one presenting the data used for the study and the second explaining the methodology employed. In Section 4, the results are detailed, while in Section 5 the main results are discussed, and finally, Section 6 offers some conclusions.

2. Sustainability reports

2.1 Sustainability reports in the European Union: towards mandatory regulation

In the early 1990s, stakeholders begin to demand more sustainability information from companies (Gray, 2006), resulting in a rise in reports aimed at disclosing sustainability information (Gray, 2006). However, different studies (Luque-Vílchez and Larrinaga, 2016; Boiral et al. 2017; Korca et al. 2021) highlight the poor quality of this sustainability information disclosed by companies over those two decades, which prompted some authors (Deegan, 2002; Mobus, 2005; Albareda et al. 2007; Mio et al. 2021; Ottenstein et al. 2021) to call for some kind of regulation to improve this quality. The EU addressed this need by passing Directive 2014/95/EU (European Commission, 2014) in 2014.

Companies that are affected by Directive 2014/95/EU (European Commission, 2014) must include in the management report a section with information on environmental, social, and personnel-related issues, where their respect for human rights and the fight

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against corruption and bribery are made clear. The aim is to enable an understanding of the company's performance, results, situation, and the impact of its activities. In this regard, the only companies that must include a sustainability statement on a consolidated group basis are companies that have an average number of employees exceeding 500 or that meet at least two of the following conditions during two consecutive years: assets exceeding 20 million euros, turnover exceeding 40 million euros, and/or more than 250 employees (European Commission, 2013). There are two exemptions to the obligation to produce this management report: when companies are obliged to submit another report containing this information within six months of the end of the financial year; and in the case of a subsidiary company, when the parent company includes this information in the management report. However, the regulation does not clarify how companies should prepare this report and is ambiguous when it comes to indicating which sustainability reporting guidelines should be used (Dumay et al. 2019), highlighting the use of the GRI Guidelines (GRI, 2020a) and the European Commission's Guidelines on sustainability reporting (European Commission, 2017). In addition, the abovementioned Directive also allows each country to establish its own voluntary framework of penalties in the event of non-compliance (European Commission, 2014). These aspects are key, since companies have to indicate which guidelines they are basing their reporting on will determine how the SR is prepared and whether is comparable. Furthermore, if countries sanction companies for non-compliance, it is turned into a coercive measure.

Despite the recent implementation of Directive 2014/95/EU (European Commission, 2014), several studies emerge analysing the impact of the regulation in the level of disclosure. For example, authors such as Matuszak and Różańska (2017) conduct an analysis to measure the scope and quality of non-financial reports submitted by companies listed on the Warsaw Stock Exchange (WSE), showing that companies placed little emphasis on disclosing information related to human rights and anticorruption. Along the same lines as Matuszak and Różańska (2017), Mion and Adaui (2019) carry out a content analysis of the SR of listed companies in Italy and Germany, finding that the quality of the reports increased after the entry into force of Directive 2014/95/EU. In addition, Tarquinio et al. (2020) study the impact of this new regulation on the amount of non-financial information disclosed by listed Italian companies; surprisingly, the results indicate that there is a general reduction in the disclosed indicators and a decrease in the disclosure rate. Subsequently, Korca et al. (2021) study the non-financial information of an Italian banking group before and after the entry into force of Directive 2014/95/EU (European Commission, 2014). The results show that disclosure increased considerably in terms of quantity after the regulation, however, the improvement in quality is fairly limited, with the exception of the topics relevant to the company under study. Similarly, Cosma et al. (2021) focus on the banking sector, researching 45 banks from different EU countries, including the UK, before and after the introduction of the Directive. The study reveals that its effects on the stakeholder engagement process are limited and the improvements in stakeholder engagement are linked to the characteristics of the Board of Directors.

In Spain, Directive 2014/95/EU (European Commission, 2014) is first adopted by Decree-Law 18/2017 (Gobierno de España, 2017). One year later, in 2018, Law 11/2018 is passed (Gobierno de España, 2018), establishing that the companies affected are those indicated in Directive 2014/95/EU, but it does not introduce any sanctioning regime. In

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addition, from 2021 on, the threshold for the first requirement is reduced from 500 to 250 employees. The law also extends the Directive by stipulating not only that an audit firm must check if the SRs are provided, but also that the information contained in the reports must be verified by an auditor. Therefore, around 2,000 Spanish companies must prepare SR on their CSR policies, to be presented together with the company's annual accounts (INE, 2021).

Since then, only two studies (Sierra-García et al. 2018; Esteban-Arrea and Garcia-Torea, 2022) are conducted in Spain, to the best of the authors' knowledge. They analyse the quality of sustainability information following the transposition of Directive 2014/95/EU (European Commission, 2014). The first study, by Sierra-García et al. (2018), examines the SR published in 2018 by Spanish companies listed on the IBEX-35. The results indicate that the level of compliance depends on the sector in which the company operates, and the highest levels of disclosure correspond to companies that previously produced this kind of information. Esteban-Arrea and Garcia-Torea (2022) also analyse the 2018 sustainability information of Spanish listed companies to explore the relationship between the adoption of a particular strategic response and the configuration of companies' stakeholders, showing that the quantity rather than the quality of information increases.

In this context, it is worth mentioning that there are only two studies that claim Directive 2014/95/EU does improve the quantity and/or quality of disclosed information (i.e., Sierra-García et al. 2018; Matuszak and Różańska, 2017), unlike the rest of them, which find that this regulation does not improve either the quantity or the quality of sustainability information (e.g., Tarquinio et al. 2020; Korca et al. 2021; Cosma et al. 2021; Esteban-Arrea and Garcia-Torea, 2022).

2.2 Sustainability reports in agri-food companies: A literature review

The agri-food sector is considered environmentally sensitive (Brammer and Pavelin, 2008; Reverte, 2009) given that improper management of companies can contribute to environmental deterioration, resource depletion, and poverty (Pelletier et al. 2011; KPMG, 2020). This is one of the main reasons it is considered a core sector for governments and society in general (Lombardi et al. 2015). Indeed, a current matter of concern in agri-food companies is CSR, the forerunner to sustainability reporting, and, despite the fact that the subject is attracting growing attention from scholars, the research related to the agri-food sector is still in its early stages (Topp-Becker and Ellis, 2017).

In this regard, according to Luhmann and Theuvsen (2016), who conduct a review of the literature on CSR in agri-food companies, the studies can be classified into six main lines of research: definition of CSR (see, e.g., Heyder and Theuvsen, 2012; Hartmann et al. 2013); motives for implementing CSR (see, e.g., Hartmann, 2011; Busch et al. 2015); variables influencing the implementation of CSR concepts (see, e.g., Hartmann, 2011; Bourlakis et al. 2014); responsibility for and design of parameters for CSR (see, e.g., Poetz et al. 2013; Hieke et al. 2015); CSR and firms' performance (see, e.g., Lombardi et al. 2015; Ross et al. 2015); and communication of CSR (see, e.g., Halbes et al. 2005; Meixner et al. 2015). The abovementioned authors stress that the topic of CSR communication, particularly employing sustainability reporting, seems to be the least explored, even though it represents a crucial way to reinforce the business strengths of agri-food companies (Lombardi et al. 2015). Thus, by preparing and disclosing SR,

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companies can commit to long-term and sustainable value creation instead of merely short-term economic value creation (Dumay et al. 2016). This is in line with findings from other studies such as that by Hartmann (2011), who also conducts a literature review of studies on CSR in agri-food companies.

The limited literature about CSR communication is focused on different issues such as the role of social media (e.g., Meixner et al. 2015), the analysis of the effects of a particular CSR strategy (e.g., Heyder and Theuvsen, 2012), or the information required by consumers (e.g., Halbes et al. 2005). However, there are far fewer studies that analyse the disclosure of sustainability information using SR in the agri-food sector. Among those that do, Baviera-Puig et al. (2014) develop a method based on the Analytic Network Process (ANP) to study four SRs published by Spanish food companies. This method allows them to determine the strengths and weaknesses of the reports, estimating each improvement ratio, as well as the company's link with the corresponding stakeholders. Their results show that half of the reports present poor communication skills, while the authors suggest that their analysis could serve as a benchmark for SR. In a similar vein but focusing on the analysis of information disclosed in sustainability reporting by US agri-food companies throughout the supply chain, Ross et al. (2015) find that the implementation of specific sustainability actions depends on the sectorial context in which the company works, so that they cannot be replicated for all companies. Furthermore, they conclude that the main problem is the lack of standardization in the disclosure of the sustainability initiatives developed by companies (e.g., waste reduction or emission reduction) since companies avoid disclosing sensitive information, omitting issues that affect stakeholders.

In the UK, Souza-Monteiro and Hooker (2017) and Bradley and Botchway (2018) also analyse the information disclosed by agri-food companies. The former study examines how SR adapts to business strategies, by means of the distribution of CSR claims (i.e., CSR messages on new products) and quotes (i.e., references in CSR reports) across different CSR topics for seven UK food retailers for the period 2006-2012. They find that claims occur significantly more frequently than quotes, particularly for topics related to the local community. Therefore, companies provide a higher level of information in their trading strategies than in reports. Regarding the latter, Bradley and Botchway (2018) perform a content analysis of the SR released by the 16 members of the British Coffee Association (following GRI guideline version G4 - GRI, 2014) for a four-year period (from 2009 to 2013). From their analysis, the authors identify a list of 94 indicators (44 environmental, 30 social, and 20 economic) for inclusion in an indicator model which can help solve companies' sustainability challenges. However, they also reveal how incomplete the information is, highlighting the lack of quantifiable measures. Sodano and Hingley (2018) report similar findings from their analysis of the 26 largest agri-food companies in the world, using a content analysis index provided by Bouten et al. (2011). They show that the level of comprehensive reporting in agri-food companies is low, and stress the need for institutional support to improve it.

Similarly, Nara et al. (2019) analyse sustainability indicators using the Multi-Attribute Utility Theory (MAUT) framework through data collected from 67 surveys of individuals involved in tobacco production by multinationals in Southern Brazil. The authors examine whether SR respond to Triple Bottom Line (TBL) standards and assess the focus of the indicators. The results present a considerable imbalance between the

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analysed indicators that constitute TBL. The authors conclude that there does not seem to be concern about tobacco producers or about the impact of the end of tobacco culture. This raises doubts about the legitimacy of these indicators, especially when taking into account the way they are reported to society. Reporting opposing findings, Dos Santos et al. (2020) research the voluntary disclosure of sustainability information by 151 large companies in the Brazilian agri-food sector, revealing concerns about the relationship between sustainability and financial performance. Thus, companies begin to apply sustainability initiatives in order to improve that performance. In addition, the agri-food companies seem to increase their degree of voluntary disclosure in response to negative publicity, since this can affect their legitimacy and relationship with stakeholders.

Finally, Conca et al. (2020) analyse the environmental, social and governance (ESG) disclosures of 57 European listed companies belonging to the agri-food sector between 2010 and 2018. They examine the impact of a set of economic, financial and disclosure-related variables on the profitability and market value of the companies. The results suggest that greater transparency and accountability help to improve business profitability.

In some of the studies cited (Nara et al. 2019; Dos Santos et al. 2020; Conca et al. 2020), the authors find that the companies that disclose the most are those that receive bad publicity. In such cases, these disclosure practices can be referred to as "greenwashing" (Khan et al. 2020), defined as the process by which companies selectively report positive environmental information while hiding negative one (see Lyon and Maxwell, 2011; Lyon et al., 2013; and Marquis et al., 2016). Khan et al. (2020) conclude that policymakers could encourage voluntary disclosure by determining the impact of pollution and setting a standard to improve the quality and quantity of information.

Table 1 presents a comparative summary of the abovementioned research papers (the first of its kind to date, to the best of the authors' knowledge), which shows the diverging objectives, approaches, sample sizes and methodologies. However, all these studies point to the fact that there is still a long way to go— in terms of both quantity and quality— when it comes to disseminating this type of information.

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Table 1. Sustainability reports in agri-food companies.

Authors (year)	Research aim	Sample (period)	Theoretical framework	Methodology	Main results	Main conclusions
Baviera-Puig et al. (2014)	To develop a method to assess the sustainability of the Spanish agri-food sector	4 large Spanish companies (2011-2012)	Stakeholder theory	ANP	The weaknesses and opportunities of all the SRs are determined, in addition to the company's relationship with its stakeholders	Half of the SRs display poor or mediocre communication skills
Ross et al. (2015)	To assess the sustainability initiatives implemented by agri-food companies	14 large US companies (2009-2011)	Stakeholder theory	Content analysis	The adoption of specific sustainability initiatives depends on the company's context	Lack of standardization in the sustainability reporting initiatives makes it easier for companies not to disclose sensitive information
Souza-Monteiro and Hooker (2017)	To evaluate the adaptation of SR to business strategies	7 UK food retailers (2006-2012)	Institutional theory	Mixed method approach	Retailers adapt commercial strategies by distributing CSR statements and quotes on different CSR topics	SRs are not aligned with business strategies
Bradley and Botchway (2018)	To provide an indicator model	16 worldwide members of the British Coffee Association (2009-2013)	Legitimacy theory	Content analysis	Proposal of a list of 94 sustainability indicators that would help to solve the challenges of the industry in this area	Difficulty in interpreting the information or elements that make up the indicators reported by the companies
Sodano and Hingley (2018)	To analyse the level of comprehensive reporting	26 major companies in the world (2013)	N/A	Content analysis	The level of comprehensive reporting in the agri-food companies is low	There is a need for institutional reinforcements to improve SR
Nara et al. (2019)	To analyse the sustainability indicators published in the reports	A survey of 67 people linked to the tobacco industry (2016-2017)	N/A	Multi-Attribute Utility Theory	The information published in the SRs is not focused on the companies' achievement in terms of the sustainability indicators in the Triple Bottom Line (TBL) standard	Companies do not report clearly in SR and managers show no real concern about standardizing these reports
Dos Santos et al. (2020)	To assess the voluntary disclosure of sustainability information	151 of the largest Brazilian agri-food companies (2016)	Stakeholder and legitimacy theory	Confirmatory factor analysis and tobit model	Negative media exposure, and high pollution impact positively influence voluntary SR	Policymakers could encourage voluntary disclosure by determining the impact of pollution and setting a higher standard
Conca et al. (2020)	To examine the influence that ESG disclosure has on companies' profitability and value	57 European listed agri-food companies (2010-2018)	N/A	Empirical analysis, multivariate regressions with panel data	Companies' ESG disclosure has an impact on corporate profitability, with the study reporting a positive relationship between profitability and strictly environmental and social disclosure, and a negative one between the market value of the company and disclosure related to governance	Companies need to improve SR, given that greater transparency and accountability help to improve business profitability

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3. Methodology

3.1 Description of the case study

Data were collected from the 30 Spanish agri-food companies which produced SR according to GRI guidelines in one year during the period between 2018 and 2020[2], after the entry into force of the law that transposed Directive 2014/95/EU (European Commission, 2014; Gobierno de España, 2018). Thus, the analysis takes a country and sector-based approach. The country can influence sustainability reporting through culture, financial systems, government systems and societal attitudes towards the legitimate roles of companies (Fifka, 2013; Sodano and Hingley, 2018), with Spanish firms being classified as stakeholder-oriented, and also more likely to develop sustainability initiatives (Fifka, 2013; Husted and de Sousa-Filho, 2017). Meanwhile, the sector influences the level of companies' social, environmental and sustainability disclosure (Legendre and Coderre, 2013; Kansal et al. 2014; Raucci and Tarquinio, 2020; and EFRAG, 2021). As a consequence, there is a notable proliferation of sector-specific requirements. In addition, the 30 companies analysed are all large companies, which represent an important industrial segment in Spain (Cajamar, 2020) and can serve as a benchmark for other countries. Lee and Kohler (2010) highlight the potential of benchmarking activities to create a competitive environment within an industry, which facilitates the implementation of CSR activities such as sustainability reporting.

The data collection was carried out in two phases. First, the GRI platform was accessed to search for companies belonging to the Spanish agri-food sector. However, the number of SR obtained was very low. Second, in order to increase the sample, the web pages of the first 1,448 agri-food companies, ordered by number of employees, present in the SABI[3] database were examined in order to find SR, and, when the reports were not available on the websites, emails were sent to the companies to request them. In the end, 30 large companies were found (see Table 2 for companies' characteristics).

Table 2. Features of analysed agri-food companies and type of sustainability reports.

Company	Nº employees	Turnover in euros	Assets	Year	Type of report[a]
BEVERAGE					
Colebega	541	5,497,977	227,575,434	2019	1
Corporación Hijos de Rivera, S.L.	1,178	40,313,916	186,355,087	2019	3
Damm	467	220,792,000	1,447,225,968	2019	2
Heineken	7,094	1,166,116	979,175,451	2018	2
Mahou	1,283	1,167,613	1,871,695,000	2019	1
FOOD					
Aceites Borges	1,154	355,046	102,090,000	2018	1
Anecoop	209	770,005,000	142,325,742	2020	2
Angel Camacho	787	157,615,100	140,299,000	2019	2

[2] The information analysed refers to the year-end date (31 December) of the corresponding years 2018, 2019 and 2020.
[3] SABI (Iberian Balance Sheet Analysis System) is an exclusive web tool developed by INFORMA in collaboration with Bureau Van Dijk, which allows users to easily and quickly access to the general information and annual accounts of Spanish and Portuguese companies.

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Azucarera Iberia SLU	658	284,525,000	410,698,000	2019	1
Bimbo España	1,975	395,921,000	219,501,000	2019	1
Cargill S.L.U	685	31,213	660,565	2018	2
Champinter	320	1,684,497	68,275,079	2019	1
Congalsa	322	82,931,000	63,657,041	2018	2
Dallant	250	48,397,000	56,347,448	2018	2
Deoleo	273	773,000,000	38,192,000	2019	3
Ebro Foods	7,189	934,776,000	2,126,712,000	2018	3
Hero España	779	183,516,955	290,444,478	2020	3
Grupo Calvo	451	191,289,000	230,009,723	2019	2
Grupo Dulcesol	2.421	335,000,000	67,747,275	2018	1
Grupo Fuertes	563	627,943	772,054,595	2018	2
Grupo Siro Corporativo S.A. y Sociedades Dependientes	4,421	9,118,000	371,653,000	2020	3
Grupo Vall Company	399	965,790,666	1,078,053,490	2018	2
Gullón	771	374,368,133	507,209,893	2019	2
Holding Farinera Vilafranquina	2,808	107,081,000	194,899,556	2018	3
La Casa	731	484,614	45,104,725	2018	1
Nestlé	3,641	2,128,939	1,776,015,000	2019	2
Nueva Pescanova	10.749	204,000,000	558,515,000	2020	1
Pascual	2.300	638,646,000	559,482,000	2019	3
Primaflor	1.300	2,586,909	32,203,083	2019	2
FOOD AND BEVERAGE					
Importaco	461	324,360,726	138,095,749	2020	2

[a] (1) Management report; (2) Separate report published together with the management report; (3) Consolidated management report.

3.2 Content analysis

To perform the analysis of the Spanish agri-food companies' SR, a content analysis was applied. Abbott and Monsen (1979, p. 504) define content analysis as "a technique for collecting information that consists of coding qualitative anecdotal and literary information into different categories in order to obtain quantitative scales". This technique is featured as systematic and objective using procedures, variables and categories to design and analyse qualitative data by designing criteria (Bernete, 2013); therefore, the practice of content analysis can be adapted to the requirements of scientific research, with the information collected being coded according to categories in order to build quantitative scales (Abbott and Monsen, 1979). In this regard, this tool allows an assessment of the SR and a comparison of the quantity and quality of sustainability information in the reports (Bell and Bryman, 2007), so that, it is used as an analytical technique in studies of social accounting and environmental reporting to capture the different content reported (Jones and Shoemaker, 1994). Among the different types of content analysis, thematic content analysis is used in this study (Jones and Shoemaker, 1994). It allows comparative studies of different documents, or different objects of reference, and different source periods. Some relevant examples that are related to the topic under study here include the studies of Matuszak and Roszanska (2017) and Tarquinio et al. (2020). Both researches examine the level of disclosure of SR by categorizing the information in blocks and calculating the percentage representation for each. The same approach is also used to collect the

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information disclosed by SR in studies focused on the agri-food sector, such as the one by Sodano and Hingley (2018).

As mentioned above, this study is focused on the information contained in SR that follows the GRI guidelines. GRI was chosen because it links the contents of each topic required by Law 11/2018 (Gobierno de España, 2018) to the corresponding GRI Disclosures (GRI, 2017a) and the GRI Standards guidelines (GRI, 2016). The GRI document (GRI, 2017a) divides the required information into seven blocks (i.e., General Statements, Diversity, Environment, Social, Employees, Human Rights, and Anticorruption and Bribery) according to the main topics covered by Directive 2014/95/EU (European Commission, 2014). However, in this study the analysis was focused on the last five blocks in order to avoid redundancies; specifically, the indicators therein concerning "sustainability matters" (GRI, 2017a, p.5). Indeed, the General Statements block contains information generally disclosed in corporate reports, so it would not have provided relevant results on compulsory reporting, while disclosures about Diversity are also covered in the Employee group. Those 5 blocks are divided into 19 sub-blocks composed of 60 indicators in total (GRI, 2016), which are presented in Table 3.

Table 3: GRI Selected Index Categorization.

GRI Index (60)[a]	Environmental (24) Energy (5) Emissions (7) Biodiversity (4) Materials (3) Water and Effluents (6)
	Social Local Communities (2) Social Local Communities (2)
	Employees (19) Employment (3) Management Relations (1) Occupational Health and Safety (10) Training and Education (3) Diversity and Equal Opportunity (2)
	Human Rights (11) Non-discrimination (1) Freedom of association and collective bargaining (1) Child Labour (1) Forced or Compulsory Labour (1) Security Practices (1) Rights of Indigenous Peoples (1) Human Rights Assessment (3) Supplier Social Assessment (2)
	Anticorruption and bribery (4) Anticorruption (3) Public Policy (1)

Source: Adapted from GRI (2016).

[a] Total number of indicators by category shown in brackets. For more details see Appendix I.

Following Abbott and Monsen (1979), the information was quantitatively coded using a binary variable for each indicator. Thus, if the company provided information on the GRI indicator *(I)* in the SR, a value of 1 was assigned, and when of 0 otherwise. Next, to obtain the

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scores (level of disclosure – *LD*) for each indicator *(ID)*[4], the values obtained for each company were summed and divided by the number of companies *(j)*. Then, to calculate the level of disclosure of each sub-block *(SB)*[5], the averages calculated in the previous step (i.e., ID_i) were added together and divided by the number of indicators *(nID)* comprising each sub-block. Subsequently, to obtain the level of disclosure of each block *(BD)*[6], the averages calculated for each sub-block (i.e., SB_i) were added and divided by the number of sub-blocks *(kSB)* that make up the block. Finally, the scores obtained in each block (i.e., BD_i) were summed and divided by the number of blocks *(lBD)* to obtain the average level of disclosure[7] *(MD)*.

The results of all these operations are presented as a percentage. Finally, a minimum disclosure level of 50% was defined in this study to ensure that companies at least disclosed half of the information required by Directive 2014/95/EU.

4. Results

A detailed analysis of the level of disclosure for each sub-block *(SBi)* broken down by indicators (*IDi*) is shown below. The data are derived from the SR, therefore they are empirical data as it is mentioned above. Starting with the Environmental block in Table 4:

Table 4. Environmental block.

SB	*LD*[a]	*SB*	*LD*	*SB*	*LD*	*SB*	*LD*	*SB*	*LD*
Energy	47.3 (0.23)	Emissions	41.9 (0.26)	Biodiversity	29.1 (0.26)	Materials	43.3 (0.36)	Water and Effluents	32.6 (0.20)
Range -min-max-	20-60	Range -min-max-	0-100	Range -min-max-	0-75	Range -min-max-	0-100	Range -min-max-	0-100
ID	*LD*	*ID*	*LD*	*ID*	*LD*	*ID*	*LD*	*ID*	*LD*
302-1	86.6	305-1	73.3	304-1	30.0	301-1	73.3	303-1	66.6
302-2	20.0	305-2	66.6	304-2	46.6	301-2	33.3	303-2	16.6
302-3	43.3	305-3	30.0	304-3	33.3	301-3	23.3	303-3	46.6
302-4	70.0	305-4	30.0	304-4	6.6			303-4	6.6
302-5	16.6	305-5	50.0					303-5	26.6
		305-6	10.0						
		305-7	33.3						

[a] LD stands for level of disclosure and range in %.
Note: Standard deviations in brackets.
Note: Sample size: N=30.
Note: Indicator statements can be found in Appendix I.

The highest level of information disclosed in the Environmental block corresponded to the Energy and Materials sub-blocks, although neither surpassed the 50% threshold. Lower still, only 29.1% of the Biodiversity information was reported by the analysed agri-food companies

[4] $Indicator\ Disclosure_i = ID_i = \frac{\sum_{i=1}^{j} I_i}{j} x100$

[5] $Sub-block\ Disclosure_i = SB_i = \frac{\sum_{i=1}^{n} ID_i}{nID}\ x100$

[6] $Block\ Disclosure_i = BD_i = \frac{\sum_{i=1}^{k} SBi}{kSB} x100$

[7] $Mean\ Disclosure_i = MD_i = \frac{\sum_{i=1}^{l} BDi}{lBD} x100$

in Spain. At the level of indicators, only 8 out of the 24 indicators appeared in more than 50% of the reports. It is worth mentioning that most of the companies (90%) provided information about the indicators corresponding to current electricity consumption (302-1), while somewhat fewer reported on reductions (302-4), as well as consumption of raw materials by volume or weight (301-1), water consumption (303-1), GHG direct emissions (305-2), and other direct emissions (305-2). At the other extreme, there was virtually no reporting on International Union for Conservation of Nature Red List species and national conservation list species with habitats in areas affected by operations (304-4), water discharge (303-4), and emissions of ozone-depleting substances (305-6).

Regarding the Social Local Communities block, Table 5 shows the level of disclosure by sub-blocks and indicators. This block includes only one sub-block and two indicators; it is thus the sustainability information that is least represented and measured by GRI Standards (GRI, 2016).

Table 5. Social Local Communities block.

SB	*LD*[a]
Social Local Communities	58.3 (0.36)
Range -min-max-	0-100
ID	*LD*
413-1	76.6
413-2	40.0

[a] LD stands for level of disclosure and range in %.
Note: Standard deviations in brackets.
Note: Sample size: N=30.
Note: Indicator statements can be found in Appendix I.

Here the sub-block with the highest level of disclosure (58.30%) was found. This figure was the result of one indicator with a disclosure level above 70%, measuring companies' activities involving local communities (413-1), and another below the threshold, referring to operations with significant actual and potential negative impacts on local communities (413-2).

Disaggregated results for the Employees block are presented in Table 6, where it can be observed that one sub-block of information (Occupational Health and Safety) accounts for ten indicators while the whole block is defined by nineteen.

Table 6. Employees block.

SB	*LD*[a]	*SB*	*LD*	*SB*	*LD*	*SB*	*LD*	*SB*	*LD*
Employment	53.3 (0.35)	Management Relations	36.6 (0.48)	Occupational Health and Safety	34.3 (0.24)	Training and Education	58.8 (0.30)	Diversity and Equal Opportunity	66.6 (0.37)
Range -min-max-	0-100	Range -min-max-	0-100	Range -min-max-	0-100	Range -min-max-	0-100	Range -min-max-	0-100
ID	*LD*	*ID*	*LD*	*ID*	*LD*	*ID*	*LD*	*ID*	*LD*
401-1	76.6	402-1	36.6	403-1	76.6	404-1	86.6	405-1	80.0
401-2	46.6			403-2	66.7	404-2	63.3	405-2	53.3
401-3	50.0			403-3	46.7	404-3	26.6		
				403-4	50.0				
				403-5	16.7				

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				403-6	10.0				
				403-7	13.3				
				403-8	13.3				
				403-9	26.7				
				403-10	23.3				

[a] LD stands for level of disclosure and range in %.
Note: Standard deviations in brackets.
Note: Sample size: N=30.
Note: Indicator statements can be found in Appendix I.

There were three sub-blocks for which more than 50% of companies reported information: Employment, Training and Education, and Diversity and Equal Opportunity. The last one reached 66.6%, although the unbalance distribution of indicators among sub-blocks requires some clarifications. Employment presented two indicators (401-1, 401-3) over the 50% threshold, which included information about new recruitment, staff turnover and parental leave. Conversely, two indicators met the threshold in both Training and Education and Diversity and Equal Opportunity: the ones referring to the average time spent on employee training (404-1) and programmes to increase employee skills (404-2) for the former; and diversity in governing bodies (405-1) together with women's base salary and earnings compared to men (405-2) for the latter. It is worth mentioning that there were three indicators in the Occupational Health and Safety sub-block reported by more than 50% of the agri-food companies, relating to the occupational health and safety management system (403-1) and the hazard identification, risk assessment, incident investigation (403-2) and worker participation, consultation, and communication on occupational health and safety (403-4). However, the information contained in the indicators about worker training on occupational health and safety (403-5), promotion of worker health (403-6), prevention and mitigation of occupational health and safety impacts directly linked to business relationships (403-7) and workers covered by an occupational health and safety management system (403-8) was almost entirely neglected.

The fourth block of sustainability information, Human Rights, is presented in Table 7. It contains the highest number of sub-blocks (eight) but six of those sub-blocks are represented by a single indicator.

Table 7. Human Rights block.

SB	*LD*[a]	*SB*	*LD*	*SB*	*LD*	*SB*	*LD*
Non-discrimination	63.3 (0.48)	Freedom of Association and Collective Bargaining	50.0 (0.50)	Child Labour	53.3 (0.49)	Forced or Compulsory Labour	56.6 (0.49)
Range -min-max-	0-100	Range -min-max-	0-100	Range -min-max-	0-100	Range -min-max-	0-100
ID	*LD*	*ID*	*LD*	*ID*	*LD*	*ID*	*LD*
406-1	63.3	407-1	43.3	408-1	53.3	409-1	56.6
SB	*LD*	*SB*	*LD*	*SB*	*LD*	*SB*	*LD*
Security Practices	20.0 (0.40)	Rights of Indigenous Peoples	13.3 (0.39)	Human Rights Assessment	30.0 (0.37)	Supplier Social Assessment	45.0 (0.39)
Range -min-max-	0-100	Range -min-max-	0-100	Range -min-max-	0-100	Range -min-max-	0-100
ID	*LD*	*ID*	*LD*	*ID*	*LD*	*ID*	*LD*
410-1	20.0	411-1	13.3	412-1	30.0	414-1	50.0

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				412-2	40.0	414-2	40.0
				412-3	40.0		

[a] LD stands for level of disclosure and range in %.
Note: Standard deviations in brackets.
Note: Sample size: N=30.
Note: Indicator statements can be found in Appendix I.

Only three out of the eight sub-blocks displayed a level of disclosure over 50%; namely, the Non-Discrimination, Child Labour, and Forced or Compulsory Labour sub-blocks. It is worth noting that there was only one indicator measuring Non-Discrimination information, with 63.3% of agri-food companies reporting information regarding the discrimination cases and actions taken (406-1). However, almost none of them provided data on the security personnel trained in human rights policies or procedures (410-1), incidents of violations involving rights of indigenous peoples (411-1), and significant investment agreements and contracts that include human rights clauses or that underwent human rights screening (412-3).

Finally, sustainability information related to the Anticorruption and Bribery block is described in Table 8. It is decomposed into only four indicators, with an imbalance between the two sub-blocks.

Table 8. Anticorruption and Bribery block.

SB	*LD*[a]	*SB*	*LD*	*SB*
Anticorruption	32.2 (0.34)	Public Policy	16.6 (0.37)	
Range -min-max-	0-100	Range -min-max-	0-100	
ID	*LD*	*ID*	*LD*	
205-1	23.3	415-1	16.6	
205-2	43.3			
205-3	30.0			

[a] LD stands for level of disclosure and range in %.
Note: Standard deviations in brackets.
Note: Sample size: N=30.
Note: Indicator statements can be found in Appendix I.

This block of sustainability information does not report on any sub-blocks over the 50% threshold. The indicator registering the highest value (out of three) was the one related to communication and training about anticorruption policies and procedures (205-2) which reached 43.3%, while the information related to the companies' political contributions (415-1) was the least disclosed, which conforms the only indicator to measure the Public policy sub-block.

Regarding the aggregated results (*BD*), there is a great deal of heterogeneity in the sustainability information disclosed (see Figure 1). Social Local Communities and Employees information presented the highest levels of disclosure, with 58.33% and 49.98%, respectively. Only Social Local Communities exceeds the minimum disclosure requirement (at least 50%), although the Employees block almost reached it with 49.98%. All the other blocks presented even lower levels, with the lowest level of disclosure corresponding to the Anticorruption and Bribery issues. All the company reports taken together (*MD*) addressed only 42.62% of the total number of sustainability indicators (Figure 1), revealing a low average level of disclosure for agri-food companies in Spain.

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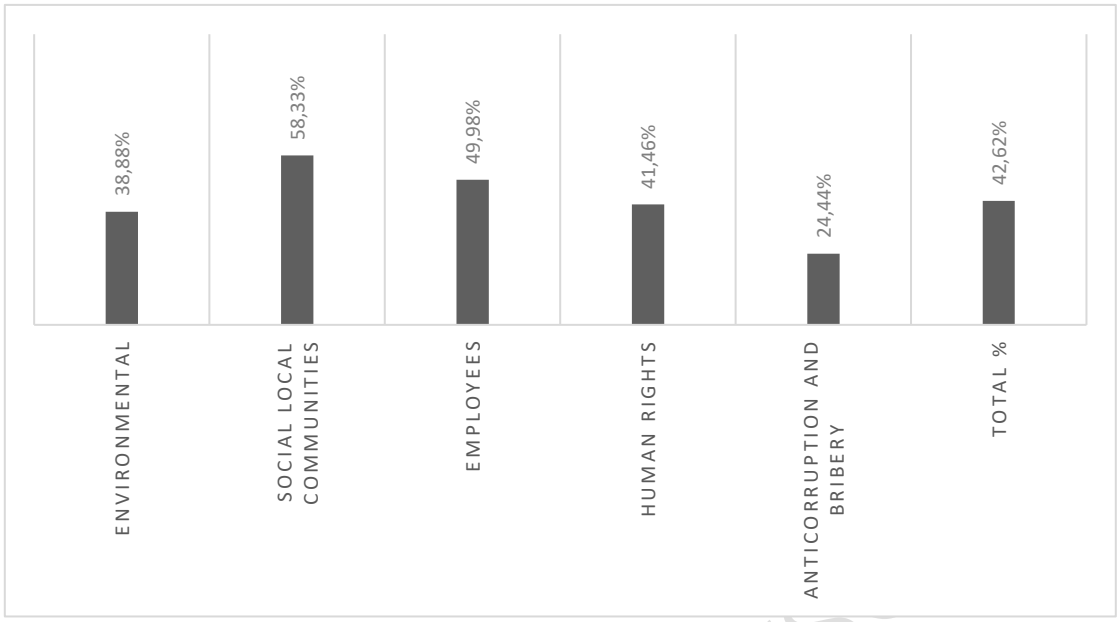

Figure 1. Blocks *(BD)* and average level of disclosure *(MD)*.

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5. Discussion

The average level of disclosure of the 30 Spanish agri-food companies was found to be 42.62%. This figure is higher than the corresponding values reported by Matuszak and Różańska (2017) and Tarquinio et al. (2020), with 35.6% and 40.52%, respectively. Those are the only studies focused on SR in accordance with the GRI index (GRI, 2017b), but apply to companies on the Warsaw Stock Exchange (WSE) and the Financial Times Stock Exchange (FTSE) Italia All Share Index. Related to the Environmental block, the level of disclosure found for the agri-food companies is 38.88%. This reflects a general low level, although biodiversity represents an important concern for both investors and the broader society (Salazar-Ordóñez et al. 2013; Sobkowiak et al. 2020), which is reflected in the high societal value attached to it (Jacobsen and Hanley, 2009; Roberts et al. 2021). The aforementioned figure lies somewhere between the corresponding results from Tarquinio et al. (2020) and Matuszak and Różańska (2017), who report disclosure levels of 35.70% and 47%, respectively, for companies on the WSE and FTSE Italia All Share Index. Indeed, the Sustainability Accounting Standards Board (SASB, 2022) index considers that the environmental issues should represent the bulk of the materiality for agri-food sector companies, and that the topics considered critical should include greenhouse gas emissions, energy management, water and wastewater management, and biodiversity. Similarly, Bellantuono et al. (2018) point out the importance of materials and effluents for academic issues related to emissions. These topics are incorporated into four different sub-blocks named by GRI as Energy, Emissions, Water and Effluents, and Biodiversity. In our study, we find a level of disclosure for the first three of these sub-blocks of 47.33%, 41.90% and 32.67%, respectively, while Biodiversity has the lowest level with 29.17%. Therefore, the results of our analysis underscore the limited information disclosed on such relevant issues for Spanish agri-food companies.

Concerning the information disclosed in the Social Local Communities block, it is striking that the level of disclosure exceeds the minimum of 50%, with a value of 58.33%. This is the best figure compared to those obtained by Matuszak and Różańska (2017) and Tarquinio et al. (2020). Indeed, Spanish agri-food companies outperform the companies from the WSE and FTSE analysed by the abovementioned authors by 14 and 22 points, respectively. It should be taken into account that local communities are defined by GRI (2017b) as people living and/or working in areas that are economically, socially or environmentally impacted (positively or negatively) by the company's activities, regardless of how far away they live. Despite exceeding the threshold established in this study, the low level of dissemination is worrying because of the major impact that company activities can have on society. It is worth mentioning that information related to Social Local Communities is considered important by academics and companies, according to Bellantuono et al. (2018), but is attributed less relevance by SASB (SASB, 2022), which does not consider it a material issue in the agri-food sector.

In the next block of information, Employees, it is interesting to note that the disclosure level of 49.98% by Spanish agri-food companies surpasses the equivalent figures reported by Tarquinio et al. (2020) (46%) and Matuszak and Różańska (2017) (39%). It can be stated that the information in this block, together with that obtained in Social Local Communities, can be more easily collected given that it deals with management activities and processes that are administrative in nature. This block, according to Clarkson et al. (2008), does not represent a company's CSR, as the information contained therein does not require a substantial commitment on the part of the companies. According to Bellantuono et al. (2018), Employee information is also considered material by academics and companies in the sector. In contrast, considering all the sub-blocks contained in the Employees block, Betti et al. (2018) and SASB (2022) state that only the Occupational Health and Safety sub-block is material (Betti et al. 2018; SASB, 2022), which, in our study, reaches a disclosure level of only 34.33%.

For the Human Rights block, agri-food companies again display the highest rate, with a disclosure level of 41.46%, compared to the levels found by Tarquinio et al. (2020) and Matuszak and Różańska (2017), at 26.10% and 34%, respectively. Human rights information represents an important source of data for the evaluation of companies (Bellantuono et al. 2018; Antonini et al. 2020) and is key to preventing issues such as child labour, discrimination, unsafe practices, or supplier abuses, among others, which are material factors to disclose (Islam and McPhail, 2011; SASB, 2022). However, authors such as Matuszak and Różańska (2017), Carini et al. (2018), or Korca et al. (2021) state that very low levels of disclosure about this are usually observed in SR.

Regarding the Anticorruption and Bribery block, the lowest level of disclosure is obtained by Matuszak and Różańska (2017) with 21%, followed by our study of Spanish agri-food companies with 24.44%, while companies in the study by Tarquinio et al. (2020) study record a much higher 47.4%. This result indicates that Spanish agri-food companies seem to be less willing than those from FTSE Italia All Share Index to communicate information on issues such as public policies concerning the monetary value of political contributions made directly or indirectly by the organization. This finding is relevant as stakeholders are increasingly demanding information about the role of firms in the fight against widespread corruption (Álvarez Etxeberria and Aldaz Odriozola, 2018). In fact, in the study conducted by Bellantuono et al. (2018), the authors again highlight the importance of the materiality of business ethics and fraud prevention; although according to SASB (2022), this information is not material for

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the agri-food sector. Despite being a relevant issue, Directive 2014/95/EU (European Commission, 2014) does not explicitly state what information should be disclosed related to governance or how to combat corruption.

On the other hand, it should be mentioned that only 30% of the SR analysed presents an assurance statement, despite the fact that the aforementioned Directive (European Commission, 2014) establishes that an audit firm must at least verify that the sustainability statements are provided. In this regard, the existence of assurance could improve the quantity and quality of the information disclosed in the reports (Kolk and Perego, 2010; Rossi et al. 2020) even if it entails additional costs.

6. Conclusions

Despite the fact that more than 70% of the world's 250 largest companies publish SR (KPMG, 2020), and the percentage in the agri-food sector has increased over time, the quality and quantity of these reports still fairly poor, especially when compared to financial reports (Tschopp and Huefner, 2015). This can be corroborated by the analysis of SR from 30 large Spanish agri-food companies, where most of the reports fail to reliably document the information at indicator level. Indeed, the blocks with the best performance are considered less relevant or material (Social Local Communities and Employees) by authors such as Clarkson et al. (2008), Bellantuono et al. (2018) and SASB (2022). It can thus be stated that there is room for improvement in the quality of information contained in Spanish agri-food companies' SR.

It should be noted that the European Union has taken on the challenging goal of ensuring sustainable development (European Commission, 2020), and sustainability reporting plays a key role in achieving that goal. However, Directive 2014/95/EU (European Commission, 2014) is featured by the ambiguity of the requirements and also it requires the same information from all companies without applying a sectoral-based approach. This ambiguity in the requirement for sustainability information and the lack of sanctions may result in low levels of information disclosure, which can even lead to companies engaging in "greenwashing" practices, i.e., using SR as a marketing tool rather than as a source of information for consumers (Khan et al. 2020). Some scholars are highly critical of the reliability of corporate SR and the veracity of the effort companies make to contribute to sustainability (Michelon et al. 2015; Cho et al. 2015; Chelli et al. 2019). In our analysis, Spanish agri-food companies record low disclosure levels in the blocks that SASB (2020) and Bellantuono et al. (2018) consider the most material and sensitive which may put the legitimacy of these companies at risk. Indeed, the European Commission (2019) states that it is necessary to improve the traceability of companies through these reports. For this, the information must be more reliable, comparable, and verifiable to help consumers make more sustainable decisions.

On the other hand, both the SASB index (SASB, 2022) and the GRI (GRI, 2020b) propose guidelines differentiated by sector of activity, indicating which information is most relevant and material for each industry. Therefore, they can help to improve the quantity of information disclosed in SR, and are thus recommended. Clearer guidelines should be established so that companies can focus on providing the sustainability information relating to the key issues in the sector, with the goal of improving companies' CSR transparency. This is an issue that is becoming ever more relevant to a society that is increasingly aware of the key role played by the interaction of companies with their environment.

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In addition, it is worth mentioning that Directive 2014/95/EU (European Commission, 2014) currently only applies to large companies, but sets a precedent (and an example to follow) for small and medium-sized ones (SMEs). De facto, sustainability reporting requirements have been tightened during the Covid-19 pandemic (EFRAG, 2021), leading to the publication of the European Commission's proposal for a Directive on the Corporate sustainability reporting (European Commission, 2021) in April 2021. The aim of this is to renew Directive 2014/95/EU (European Commission, 2021), requiring more disclosure obligations for large companies from 2023 and extending the scope of reporting to include SMEs from 2026 (EFRAG, 2021).

Finally, we are aware of the limitations of the study, which are directly related to the selection of the GRI guidelines as a reference for the preparation of SR. Although these guidelines are widely-recognised internationally, not all large Spanish agri-food companies use them. Therefore, it could be advisable to broaden the analysis to include companies that follow other standards such as SASB or United Nations Global Compact (UNGC) and, of course, agri-food companies in others European Union countries. Added to this, our findings refer to the first years following the adoption of the EU reporting requirements (European Commission, 2021); however, the impact of these requirements will be more clearly observable after a longer period.

Declarations

Conflict of interest The authors declare no conflict of interest.
Ethical approval Neither the article nor portions of it have been previously published elsewhere.
Consent to participate This article does not contain any studies with human participants or animals performed by any of the authors.
Consent to publish All authors consent to the publication of the manuscript in Springer, should the article be accepted by the Editor-in-chiefupon completion of the refereeing process.

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Appendix

Appendix I: GRI Selected Index

Topic-Specific Disclosures		*Indicators GRI Standards*	*Disclosure Title*
Environmental	Energy	302-1	Energy consumption within the organization
		302-2	Energy consumption outside of the organization
		302-3	Energy intensity
		302-4	Reduction of energy consumption
		302-5	Reductions in energy requirements of products and services
	Total	5	
	Emissions	305-1	Direct (Scope 1) GHG emissions
		305-2	Energy indirect (Scope 2) GHG emissions
		305-3	Other indirect (Scope 3) GHG emissions
		305-4	GHG emissions intensity
		305-5	Reduction of GHG emissions
		305-6	Emissions of ozone-depleting substances (ODS)
		305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions
	Total	7	
	Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas
		304-2	Significant impacts of activities, products, and services on biodiversity
		304-3	Habitats protected or restored
		304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations
	Total	4	
	Materials	301-1	Materials used by weight or volume
		301-2	Recycled input materials used
		301-3	Reclaimed products and their packaging materials
	Total	3	
	Water and effluents	303-1	Interactions with water as a shared resource
		303-2	Management of water discharge-related impacts
		303-3	Water withdrawal
		303-4	Water discharge
		303-5	Water consumption
	Total	5	
	Total environmental	24	
Social Local Communities	Local communities	413-1	Operations with local community engagement, impact assessments, and development programs
		413-2	Operations with significant actual and potential negative impacts on local communities
	Total	2	
	Total social local communities	2	
Employees	Employment	401-1	New employee hires and employee turnover
		401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees
		401-3	Parental leave
	Total	3	
	Management relations	402-1	Minimum notice periods regarding operational changes
	Total	1	
	Occupational health and safety	403-1	Occupational health and safety management system
		403-2	Hazard identification, risk assessment, and incident investigation
		403-3	Occupational health services
		403-4	Worker participation, consultation, and communication on occupational health and safety
		403-5	Worker training on occupational health and safety
		403-6	Promotion of worker health

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		403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships
		403-8	Workers covered by an occupational health and safety management system
		403-9	Work-related injuries
		403-10	Work-related ill health
	Total	10	
	Training and education	404-1	Average hours of training per year per employee
		404-2	Programs for upgrading employee skills and transition assistance programs
		404-3	Percentage of employees receiving regular performance and career development reviews
	Total	3	
	Diversity and equal opportunity	405-1	Diversity of governance bodies and employees
		405-2	Ratio of basic salary and remuneration of women to men
	Total	2	
	Total employees	19	
Humans Rights	Non-discrimination	406-1	Incidents of discrimination and corrective actions taken
	Total	1	
	Freedom of association and collective bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk
	Total	1	
	Child labour	408-1	Operations and suppliers at significant risk for incidents of child labour
	Total	1	
	Forced or compulsory labour	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour
	Total	1	
	Security practices	410-1	Security personnel trained in human rights policies or procedures
	Total	1	
	Rights of indigenous peoples	411-1	Incidents of violations involving rights of indigenous peoples
	Total	1	
	Human rights assessment	412-1	Operations that have been subject to human rights reviews or impact assessments
		412-2	Employee training on human rights policies or procedures
		412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening
	Total	3	
	Supplier social assessment	414-1	New suppliers that were screened using social criteria
		414-2	Negative social impacts in the supply chain and actions taken
	Total	2	
	Total human rights	11	
Anti-corruption and bribery	Anti-corruption	205-1	Operations assessed for risks related to corruption
		205-2	Communication and training about anti-corruption policies and procedures
		205-3	Confirmed incidents of corruption and actions taken
	Total	3	
	Public policy	415-1	Political contributions
	Total	1	
	Total anticorruption and bribery	4	
	Total	60	

Source: Adapted from GRI (2016).

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